



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/760,356	01/21/2004	Kai-Chiang Wu	MR1035-1366	8712
4586	7590	12/30/2004	EXAMINER	
ROSENBERG, KLEIN & LEE 3458 ELLICOTT CENTER DRIVE-SUITE 101 ELLICOTT CITY, MD 21043			LEVI, DAMEON E	
			ART UNIT	PAPER NUMBER
			2841	

DATE MAILED: 12/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/760,356

Applicant(s)

WU, KAI-CHIANG

Examiner

Dameon E Levi

Art Unit

2841

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Spielberg et al US Patent 6005778.

Regarding claim 1, Spielberg et al discloses an assembly where stacked-chip packaging structure includes:

a plurality of stacked chips(for example, see element 20, 40, Figs 1-5), and each chip has a plurality of wires(for example, see element 28, Figs 1-5), that is connected to a plurality of gold finger sets(for example, see element 18 Figs 1-5), wherein each gold finger set has a plurality of gold finger units(for example, see element 18 Fig 1), that are electrically connected to one another, and each wire that can be connected to one another on each chip is connected to the gold finger unit of the same gold finger set(for example, see Figs 1-10).

Regarding claim 2, Spielberg et al discloses wherein each wire that can be connected to one another on each chip is separately connected to different gold finger units of the same gold finger set(for example, see elements 28,18 Fig 1).

Art Unit: 2841

Regarding claim 3, Spielberg et al discloses wherein the number of the gold finger units is not less than the number of the chips(for example, see elements 20,40,18, Fig 1).

Regarding claim 4, Spielberg et al discloses wherein on some part of the chips, each wire that can be directly connected to one another is connected to the same gold finger unit of the same gold finger set (for example, see elements 28,18 Fig 1).

Regarding claim 5, Spielberg et al discloses wherein between each gold finger unit, there is at least one wire to connect the gold finger unit so as to form electrical connection(for example, see elements 28,18 Figs 1-10).

Regarding claim 6 Spielberg et al discloses wherein a solder resist layer covers the wire(for example, see Figs 1-10, columns 2, line 35 – column 5, line 45)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Spielberg et al US Patent 6005778 in view of Rumsey US Patent 6356452.

Regarding claim 7, Spielberg et al discloses the instant claimed invention except at least one solder resist layer covers a part of the surface of the complete gold finger so as to divide it into a plurality of gold finger units.

Art Unit: 2841

Rumsey discloses an apparatus wherein at least one solder resist layer covers a part of the surface of a complete gold finger so as to divide it into a plurality of gold finger units (for example, see elements 110, 120, 130 Fig 1-4).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a solder mask as taught by Rumsey in the apparatus as taught by Spielberger et al as solder resist layers are employed in order to increase connection strength between the wire and the bond pad as well as, to prevent delamination therein.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dameon E Levi whose telephone number is (571) 272-2105. The examiner can normally be reached on Mon.-Fri. (9:00 - 5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo can be reached on (571) 272-1957. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dameon E Levi

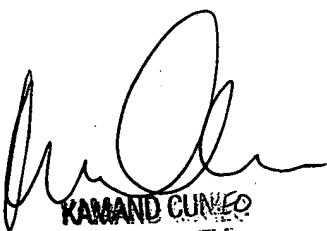
Application/Control Number: 10/760,356

Page 5

Art Unit: 2841

Examiner
Art Unit 2841

DEL



KAMAND CUNEO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800